PHRED
Public Health Research, Education & Development Program

CIHR IRSC

Building Public Health Research, Education and Development in Canada:

A Five Site Consultation

July 2002

ACKNOWLEDGEMENTS

This initiative was guided by an advisory group comprised of John Frank, Scientific Director, CIHR-IPPH; Erica Di Ruggiero, Assistant Director, CIHR-IPPH; Louise Picard, Director, Sudbury PHRED Program; Larry Chambers, President and Chief Scientist, University of Ottawa, Institute on Health of the Elderly; and Jane Underwood, Public Health Consultant who was the lead on the project.

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INTRODUCTION

The Canadian Institutes of Health Research (CIHR) - Institute of Population and Public Health (IPPH) asked the Ontario Public Health Research, Education and Development (PHRED) Partners to explore the experience of developing models congruent with the PHRED model in other provinces in Canada. Concern has recently been raised about the capacity of Canada's public health infrastructure to address public health threats.[1, 2, 3, 4] This project was intended to contribute to our knowledge of the structures required to support the expertise of public health researchers and the practice and policy sector, and to build bridges between them.

The PHRED Program was established in Ontario in 1986 and each designated site requires a formal affiliation agreement between a university and a Public Health Department. The PHRED Program, which is grounded in practice, provides practical training for future public health professionals and encourages, guides and develops public health research. The concept was based on the teaching hospital model. The program has evolved in the five Ontario sites to increase the inclusion of practitioners in the planning and dissemination of research evidence. Many public health researchers and practitioners across Canada are aware of the work of the Ontario PHRED Program. Over the past ten years, public health colleagues in various parts of Canada have expressed interest in establishing PHRED-like models in their communities to achieve integration of research and education with public health services.

The Institute of Population and Public Health (IPPH)

When the Canadian Institutes of Health Research were discussed with the President of the former Medical Research Council of Canada, the PHRED Program was recognized as a potential model. It provided an infrastructure that connects public health research with public health practice. It was suggested that the new Institutes explore the applicability of the PHRED model in other provinces. In addition, IPPH felt that local Public Health Departments and Regional Health Authorities were likely to be interested in a PHRED-like model, which integrates research, education and service activities.

Goal

To increase our understanding of existing public health models that integrate research and education with policy and practice in Canada by consulting with selected Canadian public health sites and exploring the feasibility of developing and/or fostering a PHRED-like model in other Canadian settings.

Objectives

- To define the critical success factors for the PHRED Program in Ontario.
- In selected Canadian sites, to identify the attributes that would strengthen and those attributes that would challenge a model that integrates research, education and public health service.
- To identify opportunities for further action by the Institute of Population and Public Health that could foster the integration of public health research, policy, education, and practice across Canada.

METHODS

This initiative was guided by an advisory group comprised of John Frank, Scientific Director, CIHR-IPPH; Erica Di Ruggiero, Assistant Director, CIHR-IPPH; Louise Picard, Director, Sudbury PHRED Program; Larry Chambers, President and Chief Scientist, University of Ottawa, Institute on Health of the Elderly; and Jane Underwood, Public Health Consultant.

Ontario Consultation

Consultations were conducted with approximately 35 PHRED staff members from the 5 Ontario sites, as part of a provincial PHRED strategic planning meeting in order to define key success factors and challenges for the Ontario PHRED Program.

Five Site Consultations

Key informant interviews were conducted with 53 individuals from Montreal, Calgary, Lethbridge, Halifax and Northern Nova Scotia/Cape Breton Island (Appendix I lists the names of participants). There were several other potential sites but time and resources limited the sites. The sites were selected based on the following criteria:

- Represent interests in local public health research and practice in the local/provincial governments and the universities.
- Geographically diverse.
- Include representatives that serve urban and rural populations.
- Has expressed interest in the PHRED model and/or experience, which could inform a PHRED- like model.

Using a semi-structured key informant tool (Appendix II) in individual and group interviews, information was elicited about:

- Their interest and experience in establishing an integrated research, knowledge transfer and public health service model.
- Site characteristics which would support or challenge the development of the model.
- Potential key stakeholders in developing the model at the specific site.
- Unique strategies that might be used in developing the model given the culture and environment at the specific site; and
- Recommendations to establish or enhance the model.

A draft summary report was prepared based on the initial interviews during the visits and follow-up phone calls. The draft was circulated to respective sites for review. The final report:

- Provides case notes about the experience of the five selected sites in the integration of research and education with public health practice;
- Documents the PHRED Partners' reflections of key ingredients for success and factors that would further improve the model in Ontario;
- Identifies potential funding partners for the CIHR-IPPH in establishing such a national network of centres; and,
- Outlines recommendations for the CIHR-Institute of Population and Public Health (IPPH).

FINDINGS

Ontario PHRED Program

The PHRED Program continues to flourish in Ontario at five sites including the Sudbury & District Health Unit and Laurentian University; Middlesex-London Health Unit and University of Western Ontario; Kingston, Frontenac and Lennox & Addington Health Unit and Queen's University; City of Hamilton and McMaster University; and, the City of Ottawa and Ottawa University. The PHRED Program provides practical training for future public health professionals and encourages, guides and develops public health research grounded in practice.

The key ingredients for success of the PHRED Program (Appendix III) identified in the consultation are listed below:

- The program is grounded in practice and the research agenda is highly applicable to practice.
- Academia and service are blended and the research program links with both undergraduate and graduate education.
- Participants are focused on the PHRED commitment to public health.
- Programs are accountable to multiple stakeholders.
- A critical mass of recognized expertise includes talented flexible people with diverse skills, who are visionary and systems thinkers.

Ingredients that would strengthen the program are:

- Enhanced provincial political and bureaucratic support.
- Stable funding from the province of Ontario instead of split municipal/ provincial funding.
- Updated physical and technological infrastructure.
- Increased human resources to address the heavy workloads.
- Increased visibility and improved communication for dissemination of results and linkages to engage other public health units.

In summary, the Ontario PHRED Program is a highly successful model as measured by the reports of the participants, its high productivity in both research and education, and its national and i nternational reputation. However there are challenges related to potential infrastructure uncertainties and lower profile that merit considerable attention. The organization of the PHRED Program reflects the need for a critical number of public health researchers and practitioners within one setting to ensure the best integration of education, research and practice.

Site Visits

The key themes that emerged from the site visits include the following:

a) All of the key informants are committed to providing and using research to inform policy and public health practice.

b) A requirement to develop evidence based policy is generally implicit but not always adhered to for a variety of reasons. Public health staff may not have access to some literature resources; some staff may not have time to read the literature or the literature may not have been synthesized in a form that is easily accessible; the research evidence may not yet be available in a form that is politically sensitive for policy development.

c) All of the informants recognize opportunities in their own organizations and in partner organizations for improving the integration of research and knowledge transfer activities to inform, policy and practice. These are listed below:

- Extensive good will and shared motivation for collaborative knowledge transfer initiatives to inform public health policy and practice.
- There is a history of some research collaboration between university and public health personnel at all of the sites that were visited.
- University clinical education courses are conducted at all of the sites that were visited.
- Many of the current funding opportunities require community and university collaboration.

d) All of the informants also recognize barriers in both their own organizations and in their partner organizations for improving the integration of research and knowledge transfer activities to inform policy and practice. Some common barriers are:

- Differing opinion regarding the type and rigour of methodology required for credible studies. For example, service sector professionals may argue for expediency based on political readiness for policy change while university professionals may be concerned that scientific rigour could be compromised.

- Funding mechanisms may not support the needs of researchers or the public health service and policy development needs. E.g. funders may not support the most appropriate methodology for the type of public health issue that requires research investigation.
- Lack of recognition of the skills of individuals by the partner organization.
- Insufficient corporate agreement on the partnerships, which often leaves the collaboration to be ad hoc based on individual relationships.
- Conflicting priorities and career recognition factors in the universities compared to the public health organizations, which lead to different motivation for the collaborators in individual projects. For example, university faculty feels pressure to publish while service sector staff attention is sometimes diverted to pressing service needs.

The consultation notes for the specific site visits are found in the appendices: Montreal: Appendix IV; Halifax: Appendix V; Northeastern Nova Scotia/Cape Breton Island: Appendix VI; Lethbridge: Appendix VII; and Calgary: Appendix VIII.

FUNDING

Ontario PHRED Program

The PHRED Program was 100% provincially funded until 1999. The total budget of the Ontario PHRED Program was estimated in 1999 to be over $6M for six sites. The program is currently cost shared 50/50 between the province and each participating municipality; the program is now located at five sites since one municipality failed to match the provincial funding. Recently, the Ontario provincial government has not matched the 2001 approved municipal budget enhancements for the PHRED Program.

Other Canadian Sites

All site informants consulted identified a need for funding from CIHR for infrastructure support. Some possible funding sources from provincial organizations such as the Alberta Heritage Foundation Medical Research Fund and the Nova Scotia Research Foundation were identified.

There are opportunities for matching funds in the larger cities such as the Direction de la santé publique de Montréal-Centre, the Calgary Regional Health Authority and the Halifax Capital Health Authority. They are all currently allocating funds within their operations budgets for population health research. These funds could be leveraged with external funds.

For the small regions/districts of Lethbridge and northeastern Nova Scotia/Cape Breton Island, there is less funding and it is more difficult to realign funds. Therefore, requiring matching funding arrangements is not recommended for these regions. All of the universities have difficulty funding population health research without some funds from the public health units or regional health authorities.

LIMITATIONS

Due to limited resources and time constraints for this project, the consultation did not include all of the people who might have contributed to the information that was collected. For example, the scheduling of the site visits was limited to 1-2 days and some key informants were not available on those dates. Even follow-up telephone interviews were not always possible. In addition, key informants from other cities and provinces could have contributed to this consultation had there been the

available resources to meet these people. Certainly interest was expressed from other areas in Canada and we are aware that there are interesting and productive models elsewhere. Therefore, there may be some inherent bias in this report.

CONCLUSIONS

Based on the Ontario consultation results, an impressive publication track record and its national and international reputation, the Ontario PHRED Program is a highly successful model. Both research and education initiatives are influencing policy and practice and vice-versa. However there are challenges related to infrastructure uncertainties and limited program profile that merit consideration.

All of the participants in these national consultations expressed interest and passion about integrating research, education and public health policy and practice. At the same time, they all demonstrated some organizational cultural differences amongst the service/university interests. The organizational goals and rewards are different between universities and public health agencies. For example, there are conflicts about the presentation of findings being both politically sensitive from the public health staff perspective and being rigorous and not distorted from the perspective of the university researchers. There is a need to balance the academic research interests with the needs of the public health delivery system.

Universities have expertise to contribute but they lack available funds to support research projects. The public health service sites are working hard to build research expertise. For example, in Montreal the Public Health Directorate has a well trained, critical mass of researchers and educators who act and think strategically in keeping with the mission of the agency. They have a well-established infrastructure that will be even stronger when the accountability for funds is transferred away from the hospital budgets.

The Halifax, North Eastern Nova Scotia, Lethbridge and Calgary sites are very interested in developing similar research expertise within the local public health authorities. There is current opportunity to capitalize on the willingness and varying degrees of readiness of both university faculty and public health staff to collaborate more effectively. This collaboration could be enhanced by external facilitation through CIHR funding mechanisms.

Although CIHR-IPPH, as a member of the population and public health community is very interested in all of the recommendations that were received during this consultation, some of them are outside the core mandate of IPPH. Some recommendations from this consultation are consistent with results of the 2001 Pan Canadian consultation[5] that CIHR-IPPH did in collaboration with the Canadian Institute for Health Information, Canadian Population Health Initiative. Recommendations that were repeated in both of these consultations and already are underway relate to:

- Expanding methodologies beyond traditional epidemiological models to include a variety of qualitative and quantitative methodologies;
- Increasing research on population-based interventions; fostering multi-disciplinary research,
- Including options for community led applications for research funding; and
- Supporting the Aboriginal Capacity and Developmental Research Environments (ACADRE) model of working with communities, which focuses on capacity development.

All of the recommendations from the various sites are recorded in the appendices but only additional ones that were not cited in the Pan-Canadian consultation and ones specifically relevant to the CIHR-IPPH mandate are highlighted in the following section.

SITE RECOMMENDATIONS FOR CIHR-IPPH

Research Infrastructure

1. Facilitate a national dialogue and action plan to foster infrastructure development, which supports applied research and encourages multi-sectoral collaboration relevant to public health/population health.

2. Provide funds to enhance the university/ practice linkages and to facilitate resolution of issues related to organizational challenges for improving knowledge uptake for local, provincial and federal policy development. Include support for access to public health library information and resources where there are gaps.

Research Funding Processes and Procedures

3. Support practice sector representation on pertinent peer review committees to ensure the relevance of population/public health research.

4. Allow sufficient funding and time for research programs to develop and prove themselves.

5. Support the development of research proposals after accepting letters of intent in keeping with the Canadian Health Services Research Foundation (CHSRF) procedures and streamline reporting requirements for research projects to be more practical and meaningful for both the researchers and the funders.

Education and Dissemination

6. Ensure that funding criteria require partner involvement in the development of the research plan and that partners have ongoing involvement with the researcher.

At the same time make provision for legitimate exceptions, depending on the topic, when it is not feasible or appropriate to involve the target population at the outset of the research process.

7. Provide evidence from existing well-established processes and initiatives to public health, university and other partners. E.g. systematic reviews of effectiveness of public health practice research, community development literature.

8. Identify the knowledge and skills required by public health professionals to foster an effective, dynamic workforce ready to respond to the changing needs of the population.

9. Support skills development for public health professionals to use research evidence to inform their practice.

NEXT STEPS

CIHR-IPPH will identify and provide information on key funding mechanisms and opportunities that are available to support research capacity for public health.

CIHR-IPPH will hold an invitational meeting in 2003 for key opinion leaders to dialogue about how to bridge research and practice, how to improve federal, provincial, and local linkages and to consolidate an action plan to support research infrastructure for public health in Canada.

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APPENDIX I
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APPENDIX II
KEY INFORMANT INTERVIEW TOOL

Feasibility of Integration of Public Health Research, Education and Service

Name(s)/address/phone/fax/email

The Canadian Institutes of Health Research - Institute of Population and Public Health has commissioned PHRED (Public Health Research, Education and Development) partners in Ontario to explore the feasibility of implementing models which connect public health researchers with each other, policymakers and service providers. As part of this exploratory phase, the PHRED team is conducting a series of site visits in five regions of Canada to:

- Learn about other models for integrating public health research, policy and practice.
- Identify the opportunities and challenges for implementing models that integrate public health research, policy and practice.
- Recommend areas for further action by the Institute of Population and Public Health that would facilitate/support the integration of research, policy and practice in other regions of Canada.

1. Please describe your organization's mandate. (A written description from each of the organizations would be appreciated).

2. Please describe your history of working in partnership.

List some activities that demonstrate your collaboration with your partner organization. (Also please provide any written documents or references that would demonstrate work that integrated research and service activities).

3. Please describe local current practices in reviewing evidence for policy and program interventions.

4. Please describe attributes of your organization which would support an integrated model of research, education and service.

5. Please describe attributes of your organization which would interfere with an integrated model of research education and service.

6. Please describe attributes of your partner organization which would support an integrated model of research, education and service.

7. Please describe attributes of your partner organization which would interfere with an integrated model of research, education and service.

APPENDIX III
THE PUBLIC HEALTH RESEARCH, EDUCATION AND DEVELOPMENT (PHRED) PROGRAM IN ONTARIO: KEY INGREDIENTS FOR SUCCESS

Background

In 1983, the Ontario Ministry of Health approved in principle its support of a provincial Teaching Health Unit (THU) Program. The Program was created to better balance the health system by strengthening its prevention and public health services. The program required a formal affiliation between a university with a health sciences centre, a designated board of health and the Ontario Ministry of Health.

The THU Program was 100% provincially funded until 1999. The total budget of the THU Program was estimated in 1999 to be over $6M for six sites. The program is currently cost shared 50/50 between the province and each participating municipality. The THU Program began in Ottawa and Hamilton in 1985 and now includes three other sites – London, Kingston, and Sudbury. The municipality of the City of Toronto has withdrawn as it was unable to meet the 50/50 cost-sharing requirement.

The THU program provides practical training for future public health professionals. It encourages, guides and develops public health research grounded in public health practice. The THU was based on the concept of the teaching hospital as a designated site for the integration of research and education practice. The approach has advanced in the designated sites in Ontario public health to include practitioners in planning and disseminating research evidence.

The organization of the THU reflects the need for a critical number of public health researchers and practitioners within one setting to ensure the best integration of education, research and practice.

In 1996, the evolution of the THU Program led to its renaming as the Public Health Research, Education and Development (PHRED) Program. PHRED continues to be an innovative model for public health research, education and development. The program staff are frequently consulted by provincial, national and international colleagues because the PHRED Program is recognized for its research, innovation and leadership.

Consultation

On November 15, 2001, a provincial meeting of the members of the five PHRED programs was held for the purpose of strategic and operational planning. Approximately 35 participants used this opportunity to define the *Key Ingredients for Success of the PHRED Program*.

KEY INGREDIENTS THAT CONTRIBUTE TO THE SUCCESS OF PHRED

Structure

- Grounded in practice and practice-based research.
- Includes a blending of academics, students and service providers (a third culture which is different from the organizational culture of the partner university or health unit organizations).
- Focus on mandate with a commitment to public health and accountability to multiple stakeholders.
- Critical mass of talented people with diversity of skills, background and personality.

Process

- Visionary, passionate and dedicated approaches .
- Systems thinkers
  - Creating relationships and partnerships, including those with non-PHRED health units, academic and service personnel
  - Connected intra provincially, inter provincially and internationally
  - Decentralized (a functioning network)
- Flexibility
  - Able to respond well to change
  - Ability to respond to a variety of funders directing the agenda
  - Resiliency
  - Involved in a variety of activities
- Recognized expertise
  - Resource for others
  - Mentor others

KEY INGREDIENTS THAT WOULD STRENGTHEN THE PROGRAM

Structure

- Financial stability:
  - Less time spent thinking about survival and perceived lack of support from the provincial Ministry of Health
  - Increased provincial political and bureaucratic support
  - Split funding: Potential for diverse and competing agendas due to split funding requires common understanding of goals and objectives

- Enhanced linkages with other public health units
- Adequate physical infrastructure
  - Technological/space support for faculty/staff/students
- Adequate human resources
  - Heavy workloads
  - Could capitalize more on existing technology
  - Loss of PHRED experts due to insecure funding

Process

- Heightened visibility through improved marketing
- Ongoing changes
  - Applying a proactive instead of a reactive approach to problems would enhance capacity building
- Enhanced communication
  - Interprogramme
  - Dissemination of results
  - With other public health units

APPENDIX IV
MONTREAL CONSULTATION REGARDING INTEGRATION OF PUBLIC HEALTH RESEARCH, EDUCATION AND SERVICE – JANUARY 10-11, 2002

Community Profile

Montréal: is the second largest metropolitan centre in Canada and the largest French-speaking city outside France. Approximately one million seven hundred thousand people live on the island and over three million three hundred thousand in the greater metropolitan area. The city of Montréal has an area of 177 square kilometers; the island of Montréal, 494 square kilometers and the greater metropolitan region, 3,509 square kilometers.

Direction de la santé publique de Montréal-Centre (DSP):

The following 2 universities have formal ties with the Direction de la santé publique de Montréal-Centre (DSP).

McGill University, founded in 1821, is an English-language institution in predominantly French-speaking Quebec. McGill offers courses in more than 30 different languages. Term papers and examinations may be submitted in either English or French. There are 12 faculties, 10 schools and three affiliated theological colleges.

McGill encourages the close integration of research and teaching. Research and graduate education is expected in all academic areas of the University, and McGill researchers make internationally recognized contributions to scholarship in all teaching units as well as in research centres. The full time enrolment is approximately 21,000 with approximately 25% of these in graduate programs and an additional 7500 medical residents and fellows.

Université de Montréal is Canada's second research leader among universities and allocates close to $200 million dollars to research, conducted in more than 150 research centres and units, chairs, institutes or affiliated hospitals. This research is carried out in collaboration with the surrounding society. The City of Montréal offers an urban milieu that is particularly rich in highly promising and dynamic sectors developing in symbiosis with the academic environment.

With thirteen Faculties, more than sixty Departments and its two affiliated Schools, École Polytechnique and École des Hautes Études Commerciales (HEC), Université de Montréal is active in human sciences; pure and applied sciences, including health sciences (medicine, dental medicine, pharmacy, nursing, psychology, social work, optometry and kinesiology), law, education, theology, arts and literature, philosophy, alongside with mathematics and computer sciences, engineering and management, veterinary medicine and continuing education. Université de Montréal has a strong history of public health as one of its focus areas and has a School of Public Health, which maintains a committed and broad vision of public health.

Direction de la santé publique de Montréal-Centre (DSP)

The Province of Québec is divided into regional health boards, each with a director of Public Health Services. In Montréal, seven Community/Public Health departments were merged in 1993 when the organization became a Directorate of Public Health within the **Régie régionale de la santé et des services sociaux de Montréal**. There is an administrative relationship with two teaching hospitals: Hôpital Maisonneuve-Rosemont (Université de Montréal) and Montreal General Hospital (McGill University Health Centre).

The Directorate of Public Health (Direction de santé publique – DSP) is responsible for assessment of health needs of the population and development of the most effective prevention interventions, surveillance and control of communicable and non communicable diseases, dealing with real or perceived public health emergencies and developing expertise in health promotion and disease prevention. The four promotion/prevention priorities identified by the Montréal Centre region include improving health of young children, optimal development of children and youth, prevention of woman abuse and prevention of breast cancer.

The Directorate is organized in 4 departments: Occupational and Environmental Health, Infectious Diseases, Physical Health (chronic diseases including cardiovascular disease, cancer, diabetes) and Human and Social Ecology (population health/health promotion). In addition to the four program areas, are support services including administration, planning, communication and research and education. Of note is that the DSP has "research" included in their official mandate and mission. The staff provides consultation and support to the CLSC's [Centre local de services communautaires] which provide direct social and health services including vaccinations in the community. At the DSP there are about 410 employees; approximately 200 professional staff whose activities include a variable amount of research and not more than five staff are paid partly by the university. Forty (40) people have university appointments at McGill University or Université de Montréal. The total budget is approximately $10 million with $3 million allocated to research which is expected to increase over the next two years as they hope to create a research centre in public and population health. There is an executive position of Coordinator of Research and Teaching. As recognized by university colleagues: "It is a unique setting with the highest level of public health expertise outside of a university in Canada".

Observatoire montréalais des inéqualités sociales et de la santé (OMISS)

(http://www.santepub-mtl.qc.ca /omiss.html) This is a community-based initiative, established in May 2001 in follow-up to the DSP's activities, has commitment to recognizing the broad determinants of health including poverty (1998 Report on social inequalities of health). The goal of OMISS is to produce information for decision-makers on social inequalities and their health consequences, develop a research agenda and sensitize funding agencies to these priorities. Collaborators include University of Montreal, McGill University, DSP-Montréal Centre, Concordia University, University of Quebec at Montreal and others.

GRIS (Groupe de recherche interdisciplinaire en santé) has over 30 researchers who focus on determinants of health, evaluation of interventions and health care system.

Opportunities, challenges and recommendations for integration of research, education and service collaboration from the perspective of le Direction de la santé publique de Montréal-Centre and Université of Montreal and McGill University faculty:

1. Advancing the Population Health Mandate

Opportunities

- DSP is "in the business of data" and research fits into this business.
    - Researchers participate in the DSP strategic planning process where research priorities are defined based on needs.
    - The annual report, based on the strategic plan, has input from city administrators, CLSCs, university faculty, and provincial authorities and includes evaluation of new interventions.
- The DSP research agenda is congruent with practice priorities. The diverse and multicultural population offers important research opportunities.

Challenges

- There is a need to continue to build capacity in data interpretation and implementation.
- There is a heavy workload when 29 CLSCs are asking for data. (The website is mitigating the workload to some extent)
- There is a need to identify the gap between the data that DSP has and what the policy makers need to know.
- Maintaining the researcher's focus on a public health agenda.

2. Administration

Opportunities

- Progressive public health professional staff and strong leadership with exceptional expertise who support the research strategy includes 35
- Community Medicine specialists with graduate level training.
  Public Health wants to produce information for decision-making. This implies the use of research and evaluation to generate data for decision-making purposes.
- The view of the Executive Management Committee of the DSP is congruent with the department's mission of engaging in research and training.
- The Human Resource strategy is to hire people who are committed to research and can disseminate this information. *"By definition the role for public health professionals includes being researchers who disseminate information".*
- Multiple partnerships provide a strong foundation for the integration of the research with the policy development process.
- The strategic response to heavy demand for information took form in a website. Now all CLSCs now have access to information as well as instruction on how to use the information, resulting in 100,000 hits per week.
- DSP funding supports a strong cadre of researchers who are not reliant on the universities.
  - They have a good reputation because of the research that they do.
  - Internal ethics committee is already in place.
- Université de Montreal and McGill University have:
  - A strong history and institutional support for public health.
  - Teaching loads that permit some time and resources for community based research
  - Well-respected researchers whose reputation supports the initiatives of newer researchers.

- Université de Montreal has an interdisciplinary doctoral program in public health.
- Santé Publique intends to increase its involvement with PhD programs.

Challenges

- Management of the differing values and diverse skills of the service and academic cultures.
- The Universities benefit from what DSP offers but they have no funds to contribute.
- Potential for perceived competition between the university and DSP as the DSP develops as a research body.
- Santé publique needs more human resources for writing grant applications. University graduates, on placements, help with this.
- The administration of research infrastructure funds is located in the 2 hospitals, which diminishes the emphasis on the public health mandate. There is no record or report of what public health does in terms of research.
- Smaller units outside Montreal lack access to resources and fewer opportunities for partnerships.
- 50% research funds go to provincial interests.

3. Education

Opportunities

- Proximity to four universities helps to foster a culture of inquiry.
- The DSP's provide field training/rotations for university students.
    - Commitment to investing in future practitioners is written into the mission of DSP.
- DSP researchers are also involved in university education, which keeps them up to date.
- People are nominated for joint appointments if they supervise students.
- There is annual training of staff regarding education of students.
- DSP has a large cadre of people who can support education; Assigned DSP staff is responsible for centralizing and coordinating university educational placements at the department.

- Current partnership exists between DSP and the Université of Montreal and McGill. This includes aiding in or providing lecturers, curriculum support, seminars, a summer school, student placements etc.
- New university programs are in place to support the growth of public health (new residency program, Masters program)

Challenges

- Joint course related to epidemiology and public health was successful, but unfortunately is no longer ongoing. (The strength was its inclusion of traditional epidemiology and alternative research methods.)

4. Research Experience

Opportunities

- Culture and tradition of collaboration with service sector is longstanding from the university perspective.
    - University researchers have a competitive edge with respect to research grantsmanship.
    - DSP goal is to obtain funding to bring service and academic research together as a Research Centre. (FRSQ potential funding)
- DSP and university staff are involved in the strategic planning, ensuring that the research agenda of the university is relevant to the community.
- DSP influences the research agenda, creates the funding associated with the topic, and are the recipients of the results.
- University researchers see themselves working with professional service providers and not to tell them what to do, and not to act as the experts. DSP and community partners often do not have time, resources or expertise but jump at the chance to reflect on their practice and lessons learned. Researchers becoming integrated into the practice create a true partnership.

- University researchers are increasingly accepting evaluation as part of the research agenda. *"Evaluation research is to health promotion what lab research is to pharmacology"*.
- Through OMISS, a Post-Doctoral program in Social Sciences, exists in partnership with DSP and community agencies.
- Service partners understand pressure on university faculty to publish papers.
- Service sector wants access to research resources and DSP gives researchers access to field.
- Service partners are serious about using the literature for policy.

Challenges

- Need to continue to establish stronger links with the university; there is some historical separation of researchers and service providers.
- Different perspectives within public health exist: *"we need more appreciation among different disciplines, among different values"*.
- Determining priority research areas.
- Lack of a strong link between educational activities and research activities.
- Funding organizations are not supporting practical applied public health research. This includes evaluation, which is not seen as scientific research. Applied community research is seen by some as non-scientific and non-publishable in reputable international journals.
- University faculty feels pressure to publish
- University personnel are often not given sufficient credit for community collaboration.
- Service sector staff sometimes do not have time for research or to wait for the results of the research because of a pragmatic political opportunity.
- There is some tension about how long it takes to get results. Service sector needs to understand the intricacies of collecting data/results and the time this requires.

Conclusions

DSP-Montréal-Centre is currently "*working locally but thinking globally*". The goal is to better position this unit to be part of a in a national network of researchers. **Montreal presents as a "Centre of excellence" with a strong infrastructure for integration of research, education and practice**. This infrastructure will be even stronger when the funding accountability is transferred out of the two specified hospital budgets and when they secure additional infrastructure research funding from the province. **This type of centre apparently does not exist in other parts of the province.**

DSP Montréal-Centre of the Régie régionale de la santé et des services sociaux has well trained researchers and educators who act and think strategically in keeping with the mission of the agency. There are several concrete examples of successful collaboration between the universities and the DSP such as the Summer School, OMISS, Masters Program, student placements and DSP involvement in curriculum development and university programs.

Historically and currently, public health is valued at the University of Montreal and at McGill. Doctoral, post doctoral and Masters programs are well established and there are innovative research infrastructure initiatives such as GRIS and OMISS.

Some of the key stakeholders who should be involved in future developments are Drs R. Lessard and M. Rossignol and other colleagues from these organizations.

Recommendations for CIHR-IPPH

1. A precursor of partnership for productive integration is that the research be relevant to the needs of both partners. In keeping with the example of the Canadian Population Health Initiative (CPHI), CIHR-IPPH should consider a stream of grants where the dissemination plan includes demonstration that the partner was involved in developing the research questions and that the partner has ongoing contact with the researcher.

2. The service sector should be represented on relevant review committees. CIHR should lead the way and influence others to ensure relevance in the scientific review process.

3. CIHR-IPPH could facilitate the clarification of national research priorities based on policy and planning needs of population and public health and thereby promote research that has relevance to current practice.

4. CIHR-IPPH could facilitate moving beyond encouraging partnership between academic sector and public health agencies, and include multi-sectoral community partners in keeping with requirements for research in health promotion and community development, etc.

5. CIHR-IPPH could facilitate understanding and collaboration within individual public health authorities; between government and universities; and nationally amongst researchers and public health professionals.

6. The value of public health research should be promoted and CIHR-IPPH could help to address a fundamental issue about valuing applied community research.

7. CIHR-IPPH should recognize the importance of allowing sufficient time for programs to prove themselves.

APPENDIX V
HALIFAX CONSULTATION REGARDING INTEGRATION OF PUBLIC HEALTH RESEARCH, EDUCATION AND SERVICE – JANUARY 17, 2002

Community Profile

The Halifax Regional Municipality encompasses the former cities of Halifax andDartmouth, the Town of Bedford and the County of Halifax and is home to forty percent of Nova Scotia's population. The population in 1996 was 342,966 (Census Canada) with a Statistics Canada inter censal projection for 1999 of 384,613. Metro Halifax is a commercial, educational, research and technological centre with six universities, an excellent college system and several leading research institutions.

Dalhousie University

The **Faculty of Health Professions (FHP)** at Dalhousie University is an aggregation of the Schools of Occupational Therapy, Social Work, Physiotherapy, Human Communication Disorders, Nursing, Health Services Administration, Health and Human Performance, College of Pharmacy, and the QEII-Dalhousie School of Health Sciences. This faculty is engaged in scholarship, education, service and community activism. It has academic, professional and societal responsibilities for promoting health and socioeconomic well-being. Collectively the work of the faculty embodies the broad concept of individual and population health and well-being. The mission of the faculty of Health Professions is to show leadership in diverse and critical scholarship, education and action to affect social change for health. The creation and dissemination of knowledge and its realization with the community is accomplished while celebrating the diversity and collective potential of the faculty. The faculty operations consist of 105 full-time equivalent faculty members, several active adjunct and cross-appointed faculty, 45 staff and the third largest student body at Dalhousie University; with a budget of approximately $11 M.

The FHP is a research intensive faculty with training and experience in quantitative and qualitative research methodologies. FHP has many national and international collaborative research ventures such as the Maritime Centre of Excellence in Women's Health, the Atlantic Health Promotion Research Centre, CIHR and CHSRF funded research activities. They are also collaborating with other universities.

The Department of Community Health and Epidemiology (CH&E), is part of the Faculty of Medicine and has a multi-disciplinary complement of fourteen, augmented by approximately 25 part-time members from a number of other departments, in a variety of faculties. The main areas of expertise are in public and community health; health policy and analysis; epidemiology and bio-statistics; health economics and evaluation; health services; community psychology; and environmental and occupational epidemiology. The teaching responsibilities of the Department include tutoring in the undergraduate medical education system and the Masters of Science graduate program in Community Health and Epidemiology that has been in place since 1994 and now has an enrolment of approximately 45 students. A PhD program is under development.

The research areas are multidisciplinary, collaborative, and include population and health services research; health policy and community intervention programs; addictions; environmental illness; chronic disease; and occupational and environmental health. CH&E was designated as a World Health Organization (WHO) Collaborating Centre in Community Health in 1994. In this context, Heart Health Nova Scotia serves as a demonstration program in chronic disease prevention for the European Region of WHO and for the Region of the Americas (PAHO) of WHO. The Department has established a number of vehicles to facilitate its research activities with the Population Health Research Unit (PHRU) being one notable example.

Capital District Health Authority

The Capital District Health Authority is one of nine health districts in Nova Scotia. The Capital Health District consists of the Halifax Regional Municipality and the western portion of Hants County in Nova Scotia.

Capital Health provides core health services to 385,000 residents, or 40 per cent of the population of Nova Scotia and tertiary and quaternary acute care services to residents of Atlantic Canada. Specialized adult health services are provided to a referral population from the rest of the province of 550,000, and to residents of New Brunswick and Prince Edward Island.

The Capital Health Authority which includes Public Health, the Nova Scotia Hospital and Queen Elizabeth II Health Sciences Centre employs 8,500 staff. There are 80 public health staff in the unit: 5 FTE administrative support, 68 FTE professional staff which include 50 public health nurses, 3 masters prepared nurses, and 4 nutrition positions. One vacancy out of 4 manager positions is being restructured to be manager for the Research and Education programs. All Public Health inspection functions and staffing are in other ministries such as the Department of Environment (water quality) and the Department of Agriculture (food safety).

The Nova Scotia Health Research Foundation (NSHRF)

The Nova Scotia Health Research Foundation (NSHRF), established by an act of the legislature on December 3, 1998, is dedicated to fostering health research throughout the province of Nova Scotia. They assist, and collaborate with, individuals and organizations conducting research in four key areas: health policy, health services, health outcomes, and medical research.

One of the primary roles is administering grant programs to help researchers financially. In addition, they offer workshops, develop collaborative programs and foster discussion within and produce publications for Nova Scotia's health research community. They work with partners in the public and private sectors to raise awareness of health research issues in Nova Scotia and support the development of a vibrant, broad-based health research community.

Opportunities, challenges and recommendations for integration of research, education and service collaboration:

1. Advancing the Population Health Mandate

Opportunities

- Halifax Capital Health Authority works with seven Community Health Boards who have representatives who sit on the Capital Health Board of Directors, and develop health plans, and engage in public consultation.
- Programming in Halifax is strong for children and youth but less so for adult and seniors (note 50% of all births in Nova Scotia are in Halifax).
- Since 1999, the Dalhousie School of Nursing, Faculty of Health Professions, the Capital District Health Authority and the Nova Scotia Department of Health have been exploring the opportunity to develop a Public Health Research, Education and Development program.
- Could bring together the critical mass through electronic communication.

Challenges

- Need staff to support evidence based policy development by the provincial public health working groups and to provide support to the public health professional members who already have a heavy workload.
- Ministry of Health has a 2-year planning cycle, which is not always responsive to emerging evidence.
- At the health authority level, there is limited survey research: "when we have time and as issues rise". They must juggle to make funds available for this type of initiative.

2. Administration

Opportunities

- The basic tenants of the re-written Health Act and the revised mission of the Capital Health Authority (CHA) include education and research:
  - The Capital Health Authority and its staff are integrating research with education and service.
- Funding opportunities:
  - 1% of the Regional Health Authority operating budget ($3-4M) is assigned to research.
  - Possible Regional Health Authority funds for another 1 FTE position (to be shared amongst at least 2 people to build research capacity).
  - $600,000 has been allotted by the Ministry of Health for nursing research; it may provide for university fees salary subsidy.
  - Isaac Walton Killam (IWK) Foundation provides funds for research initiatives relating to children and women.
  - Nova Scotia Health Research Fund may be able to contribute capacity.
- Community Health and Epidemiology Department at Dalhousie University is now affiliated with Public Health.
- Along with Dalhousie University, the Population/Public Health Unit would want to include strengths of other universities who have relevant public health expertise. E.g. Mount St Vincent- nutrition, elderly; nutrition - Acadia, and St. Francis Xavier.

Challenges

- Funding for facilitating cross connections between service and university needs would be helpful.

  University:
  - University may not have research funds to contribute.
  - Lack of champions in other disciplines promoting the integration of research.

- There are time constraints, partly because there are Medical Officer of Health vacancies due to recruitment challenges.
- University has a culture of individual achievement which leads to silos within the university structure and sometimes makes collaborative research difficult.

District Health Authorities:

- People in key positions change frequently which makes sustained planning difficult.
- Division of activities amongst education, research and service is very strong.
- Structures are weak in small public health regions for research/ education activities.
- Focus of practice does not always fit with curriculum. E.g. communicable disease does not fit with community development.
- Could consider offering adjunct appointments for university faculty at the CHA.

3. Education

Opportunities

- Both faculty and District Health Authority staff value field clinical education for health professionals.
- A program manager coordinates student placements and lecturesoccasionally for the Dalhousie School of Nursing.
- There is a history of and current enhancement of joint appointments between the health authority, university and hospital.
    - Mechanism for cross appointment to health authority may be available for the university.

- Health Unit is flexible regarding study/work hours.
- Many new initiatives exist. E.g. distance education.

Challenges

- Capital Health Authority needs support and contributions from university faculty and/or graduate students for staff education.

4. Research Experience

Opportunities

- Dalhousie is creating a District Department of Community Health and Epidemiology, and currently has a Department of Primary Care.
- The Population Health Research Unit (PHRU) has set up a rural office in the Annapolis District Health Authority.
- November, 2001 submission to CHSRF "*Public Sector Restructuring in Nova Scotia: The Impact on Public Health Practice and Implications for the Work Life of Public Health Nurses and Other Public Health Staff.*"
- There is good individual professional experience and good project based experience. CHA wants staff to start grant writing soon and not limit their activities to supporting university researchers.
- Annapolis Valley District Health Authority has staff that are research champions and are accustomed to partnerships. It is easier to influence policy leaders in this District because they are a smaller community.
- There are possibilities of building research foci around community development, maternal and infant health, evidence based planning, self-esteem/body image.

Challenges

- Trained research associates are needed.
- Need to identify what policies are barriers and what policies are not barriers to health.
- Methodologies need to be expanded beyond traditional epidemiological models; for example, community mobilization.
- Dalhousie University researchers want to know what the Canadian public health research agenda is and want an infrastructure to support this.
- Lack of support for the Aboriginal Capacity and Developmental Research Environments (ACADRE) model which focuses on capacity development and encourages community involvement.
- The university expertise in building a Heart Health Community Coalition and developing chronic disease prevention policy unfortunately did not include collaboration with public health staff activities.
- Regional health authorities need service-oriented research.

Conclusions

There is a great deal of interest in integrating research, education and service in the Halifax area. There appears to be more money available for research from the service sector than from the university sector at this time.

There is a history of clinical placements and some collaborative research activity with both the Faculty of Health Professions and the Faculty of Medicine. Professors in both faculties have national and internationally renowned research track records. The recent development of an affiliation agreement with the Dalhousie

Community Health and Epidemiology Department and CHA is promising. Resolution of the cultural differences between the major organizations and within the major organizations would likely lead to improved collaboration.

Some of the key people who should be involved in the development of an integrated program are Linda Young, DHA, Dr. John Ruedy, DHA, Dr. Robert Strang, DHA, Dr. Lynn McIntyre, Faculty of Health Professions, Janet Braunstein, Provincial Department of Health, and Donna Meagher-Stewart, Dalhousie, School of Nursing and other colleagues from these organizations.

There are possibilities of building research focus around community development, maternal and infant health, evidence based planning, self-esteem/body image.

Recommendations for CIHR-IPPH

1. Facilitate consensus to clarify a conceptual framework of a public health agenda, to define the public health research agenda for Canada and to advocate as a group for the research agenda.

2. Support an infrastructure associated with public health research agenda.

3. CIHR and NSHRF should jointly sponsor a consensus conference.

4. Pay close attention to fostering multi-disciplinary research, including options for community-led applications for research funding.

5. Expand methodologies beyond traditional epidemiological models to include a variety of qualitative and quantitative methodologies. E.g. community mobilization is a valid research tool.

6. Support the Aboriginal ACADRE model of working with communities, which includes capacity development and encouragement of community involvement.

APPENDIX VI
CONSULTATION VISIT AT PORT HAWKESBURY FOR COMBINED PUBLIC HEALTH MANAGERS (SHARED SERVICE DHA 7 & 8) AND, NORTHERN (SHARED SERVICE DHAS 4, 5, 6) AND UNIVERSITY COLLEGE OF CAPE BRETON AND ST. FRANCIS XAVIER UNIVERSITY

Community Profile

Port Hawkesbury, (pop. 4,000) located on the Cape Breton shore of the Strait of Canso, across from northeastern Nova Scotia, was a convenient mid point location for participants to come from Sydney on Cape Breton Island and from the northeastern Nova Scotia offices in Antigonish and Guysborough.

The Health Authorities Act (Bill 34), which came into effect on January 1, 2001, replaced the former Regional Health Boards (which had been formed in 1994) with newly created District Health Authorities (DHAs). DHAs are responsible for delivering hospital services, public health, addictions, and mental health. The role of public health services within the health system is to prevent illness, protect and promote health and achieve well-being by working in partnership with communities, families and individuals. In addition Public Health Services (PHS) within the DHAs monitors population health outcomes thereby providing a measurement of the effectiveness of the health services system. The services in Nova Scotia are organized to provide these public health key functions for the entire population within their respective geographic catchment areas. DHAs are accountable to the Minister for governing, planning, managing, delivering monitoring, evaluating and funding those services within the health district that the Minister has designated to them. Community Health Boards within each DHA are mandated with health planning related to primary health care in their communities.

Public health personnel from District Health Authority 7, which covers the areas of- Antigonish/Guysborough/Richmond; from District Health Authority, 8, which covers the areas of Cape Breton/Victoria/Inverness, and a nurse manager

(via phone) from Truro (DHA 4, 5, 6) participated in this consultation meeting. The direct line District Health Authority for a proposed partnership could be District Health Authority 7 with Public Health Service area partners from DHAs 4, 5, 6 and 7, 8.

The geographically large area includes two universities: St Francis Xavier and University College of Cape Breton. Geographically outside, the Agriculture College (food and water safety), and Dalhousie University (Medicine and Nursing) also are relevant to public health policy and practice for this area.

St. Francis Xavier University, Antigonish, Nova Scotia

The Faculty of the Department of Nursing and the Faculty of the Department of Human Nutrition are committed to research endeavours which range from maternal-child health to gerontology. In addition there is research activity in the Department of Human Nutrition about health literacy, food security, media literacy, community health impact assessment, and food science such as phytochemical composition of food. Several Nursing faculty are engaged in theoretical and applied research designed to improve the standards of nursing care and contribute to knowledge development in nursing. Both Nursing and Nutrition faculty have presented research papers at national and international conferences and play leading roles in professional association activities. The Departments of Human Nutrition and Nursing are involved in community-based research and collaborate interdepartmentally and with other universities in these endeavors.

University College of Cape Breton (UCCB)

UCCB was the first of its kind in Canada: a blending of liberal arts and sciences with technological and trades traditions. In 1980, the campus was expanded and in 1982 they were granted university degree-granting status. In 1999, to meet increasing

demands for nurses in the province, St. Francis Xavier expanded their BScN program to include a site administered from UCCB. Program faculty believe the purpose of nursing is to promote health, self care, prevention of disease and disability, coping with illness, and the achievement of a peaceful death. The program curriculum is rooted both in the biological and social sciences.

Opportunities, challenges and recommendations for integration of research, education and service collaboration from the combined perspectives of university and Public Health service personnel:

1. Advancing the Population Health Mandate

Opportunities

- Key informants recognize that key public health functions are population health assessment, health surveillance, population health advocacy, health promotion, disease and injury prevention and health protection.
- The geographical areas of DHAs (4, 5, 6, and 7, 8) have high-level population health needs and therefore have good opportunities for population health research.
- University faculty and local public health staff have expertise in rural health.
- The excellent links with Community Health Boards as well as a history of community-based research are a good basis for developing a population health research collaborative.

2. Administration

Opportunities

- Both university and District Health Authority administrators are committed to linking policy with research evidence and to working with each other.
- Extensive partnerships between community groups, and both universities and community health services, are a normal part of doing business in this area.

- With respect to human resources:
  - There is pride in work.
  - A number of practitioners have moved to university from the practice setting.
- Linkage with provincial system is important to access additional funding in areas of priority to the Department of Health. These include:
  - Health professional recruitment (building health personnel capacity and exploring new roles of health care providers).
  - Primary Health Care renewal (need to determine if a public health/ research partnership could be part of this renewal funding).
- Although provincial funding may be limited public health staff have successfully secured funding from other sources for research activities and skill enhancement E.g. LoPHID and PATH I / PATH II: Health Canada's Population Health Fund and Rural and Remote Health fund; Health Canada's Diabetes Strategy; and Social Sciences and Humanities Research Council (SSHRC) funds:
  - There have been a number of meetings about research linkage and the key informants who participated in this consultation are ready to move forward.
  - Public health staff and university faculty already have a principles agreement.

Challenges

- Numerous structural changes in regional organization of health care over past 4 years:
  - Need infrastructure to support research and its integration with policy at universities and health units but currently there is money for this.
  - Small rural budget limits Health Authority flexibility and ability to take on additional responsibilities.
  - Need to clarify the needs, priorities, potential responsibilities and operational constraints of the respective partners.

- Although they applied to Nova Scotia Research Foundation for infrastructure funding, they have not yet received formal confirmation of acceptance.

- Difficult to recruit staff for nutrition, post-graduate public health practice and public health education positions due to market competition and limited resources.
- Public health professionals who are putting meaning to population health need to be recognized for their expertise in the field.

3. Education

Opportunities

- Some University Nursing community courses and fourth year community placement courses are relevant to practice.
- Some St. Francis Xavier University Human Nutrition courses offer opportunities in community practice through a service learning program, and the Dietetic Internship Program, which begins in 2002.
- The Service sector is willing to restructure service to adapt to education sector needs.
- There is a range of skills related to research within PHS in Nova Scotia. E.g. some staff in Districts 4, 5, 6 and Districts 7, 8 have knowledge and skills in evidence based planning and surveillance.
- Some employees within public health have advanced education (Masters or diplomas in public health, epidemiology or community medicine).

Challenges

- Continuing education is needed to ensure skills of public health staff in assessment, surveillance and advocacy; tracking and forecasting health events and outcomes; integration, analysis, and interpretation of data.
- Relevance of curriculum and community experiences for students could be improved through stronger academia/service partnerships, recognizing the variability of practice across districts and sectors, especially outside of Halifax.

- Summer co-op programs models used in the hospital sector could be adapted to public health, taking into account appropriate operational timing. For example, vacation time, reduced number of programs etc.
- Unlike the dietetic graduate internship, an internship model for nursing is not feasible in Nova Scotia at this time due to other priorities in nursing education.

4. Research Experience

Opportunities

- Nova Scotia is sometimes used as a site for pilot programs by Federal program staff.
- Research interests include rural health, community capacity building, income disparities, health and literacy, unemployment, public health program evaluation, professional skills development and impact of professional practice.

Challenges

- Sometimes local universities and/or provincial agencies are not made aware of federal funding opportunities.

Conclusions

There is a great deal of interest in establishing an integrated research, education and service program. Developmental funds could help create the needed research infrastructure. There are high-level population health needs related to poverty, rural isolation and unemployment. At the same time there is experience and expertise

both in the university and in the district health authority to work with the community. Although there is genuine desire to have evidence based policy, the organizational changes in provincial policy are not clearly linked to public health problems. Although there is a history of curriculum development relevant to community, it could be improved.

Research focus could include issues related to rural health; community capacity building; determinants of health such as income disparities, health and literacy, unemployment, public health program evaluation, professional skills development and impact of professional practice.

Recommendations for CIHR-IPPH

1. Consider funding facilitated dialogue to develop a plan for an integrated research education and service program. (This work may qualify for an IPPH Workshop Support grant)

2. Provide evidence from well-established processes in public health to help establish priorities for collaborative research between and amongst public health, university and other partners.

3. Identify the knowledge and skills required of public health professionals so that they comprise an effective, dynamic workforce ready to respond to the changing needs of the population and are able to use research evidence to inform practice.

APPENDIX VII
LETHBRIDGE CONSULTATION REGARDING INTEGRATION OF RESEARCH, EDUCATION AND SERVICE – JANUARY 21, 2002

Community Profile

The population of Chinook Health Region is approximately 150,000 and is at the centre of Canada's agricultural heartland. Lethbridge, the largest city is a one-hour drive from the Rocky Mountains, approximately 200 km. south of Calgary and 100 km north of the Montana, U.S.A. border.

Chinook Health Region is rural and has a largely white population. This community has seen an increase in south Central American Mennonites and immigrants from the Netherlands, who contribute skills and resources. The Blood reserve, the largest reserve in Canada, is located near Lethbridge. The Aboriginal population experiences a higher birth rate, as well as a diabetes rate that is five times the rate of the general population.

Consultation meetings were held separately with University faculty and with public health staff.

University of Lethbridge School of Health Sciences (U of L)

The School of Health Sciences offers two baccalaureates in nursing programs, a baccalaureate Addictions Counseling program, and a certificate program in Palliative Care. There is a collaborative generic four-year nursing program and a two-year post-diploma program. The generic nursing program is intended for those graduating from high school or making a career change. It is offered conjointly with Lethbridge Community College. The post-diploma Bachelor of Nursing program is intended for registered nurses or those who have completed their programs and are awaiting registration.

Chinook Regional Health Authority (also known as Chinook Health Region - CHR):

The mission of CHR is "*We will promote, maintain and improve the health of residents of the Chinook Health Region by ensuring an affordable, accessible, accountable and integrated health system.*" There are 3500 staff working in the Chinook Regional Health Authority; approximately 150 of these staff work in public health under a Medical Officer of Health/ Vice President within the Regional Health Authority. There is also a Director Population Health/ Director Health Protection who is responsible for infection control, Public Health Inspectors and all communicable disease; and a Program Director, Wellness Services who is responsible for Public Health Nursing programs and for immunization coordination.

Opportunities, challenges and recommendations for service, education and research collaboration from the perspective of University Faculty and from the Chinook Health Region (CHR), respectively):

1. Advancing the Population Health Mandate

Opportunities

University:

- There is expertise and opportunity to do rural research.
- There are opportunities to address multicultural health issues especially the Mennonite and aboriginal communities.
- Alberta Alcohol and Drug Association do in-house research but there could be improvements in collaboration with university faculty and expanding methods expertise.

CHR:

- The Medical Officer of Health /Vice President position informs the Regional Health Authority focus regarding population health issues.
- CHR integrates public health with acute care services, which offers opportunities to disseminate population health messages across the health care system.
- Provincial Reports are an established requirement and offer the opportunity to disseminate population health information to policy makers.
- CHR currently is establishing a community health centre.
- A population health mandate is to change cultural sensitivity with a large number of staff and to try to hire a more culturally diverse staff. (CHR has a contract to deliver services for Aboriginal Peoples and the success of this program is attributed to having hired aboriginal nursing staff).

Challenges

University:

- There may be limited understanding amongst Chinook Health Region (CHR) staff about evaluation methods.

CHR:

- Water quality—Old Man River Basin Water Quality processes are complicated and include agriculture research and research related to feed line operator processes.
- Insufficient surveys, health information, surveillance on injuries, MVI, suicide, etc.
- Collation of information especially for the required 5-year cycles of reporting about health needs (now in second cycle) could be improved.

2. Administration

Opportunities

University:

- Chinook Health Region (CHR) wants to integrate research and service.
- CHR and U of L have tried joint ethics reviews but currently have two ethics and research committees, which is very cumbersome.

- The Medical Officer of Health holds an adjunct appointment at the University, Faculty of Health Sciences; joint appointments of other disciplines have been undertaken in the past.
- Faculty at the university is de facto less hierarchical which offers collaborative opportunities for various levels of staff.

CHR:

- CHR has demonstrated commitment by establishing a Research Committee and an Education Committee.
- CHR hired a community health representative who is doing community mobilization.
- In the past, four different research associated university faculty have been cross-appointed to work at CHR.
- Funding:
  - Alberta Consultative Research Network [AC(O)RN] has funded some applied research.
  - CHR provides researchers access to funding for research projects as well as small amounts for evaluation.
- Chinook Health Region is the largest employer in the area.
- Improved computer access is being worked on.

Challenges

University:

- Formalization of the relationships between the University and the public health organization, possibly including:
  - Joint payment of staff with qualifications for both organizations.
  - Funded faculty who spend time at CHR Public Health to do research.
- The University historically has not valued clinical experience when determining PhD tenure requirements.

- Research committees sometimes lack qualitative expertise.
- No infrastructure support and limited organizational and resource support for frontline staff to participate in research. (E.g. limited release time to do research and limited computer access).
- The administration favours corporate buy-in of collaborative research but the service-oriented environment appears to have difficulty tolerating the resource requirements.
- Hierarchal approach appears to be the dominant model at CHR:
  - Research is generally directed by MDs, but conducted by CHR staff.
- University does not receive money from CHR to do evaluation research.

CHR:

- 17 regional health authorities have many different ways of conducting health care business.
- Program management in the Regional Health Authority integrates long-term care and home care in "seniors health"; women's and children's health; and mental health, which may dilute a public health perspective. Research programs and policy have an acute care and long-term care focus. These programs are driven by the Coordinating Council and seem to obtain funding more easily.
- Lack of time, experience and personnel to do research (For example, nursing staff).
- Lack of funding options:
  - Insufficient ongoing sustained funding for operations, although capital funding is often available.
- External funding for population and public health research comes with very high administrative responsibilities for reporting and accounting that the staff is not equipped to handle.

3. Education

Opportunities

University:

- Master's and PhD programs are being developed at the University of Lethbridge, which will help to increase the number of public health staff with graduate degrees.
- There is political incentive provincially to pay course fees; rural location has increased support for distance education.
- University's curriculum shift to problem based learning offers the increased practical skills for problem solving and appreciation of research evidence.
- Education for new and established Health Professionals is valued:
    - Currently CHR has employees either instructing at the university or being trained by the university.

CHR:

- The university uses CHR staff as advisors.
- Director, Population Health sits on Health Human Services committee at the University.
- CHR provides student placements as well as summer rotations for University of Lethbridge and Athabasca University students.

Challenges

University:

- There is very little money for public health staff development.
- Some faculty feel that the University sometimes demonstrates an ivory tower mentality:
    - Masters trained professionals are generally overlooked.
- CHR staff retention/recruitment could be improved.

CHR:

- CHR is not involved in curriculum creation or revision at the university.

4. Research Experience

Opportunities

University:

- SEARCH (Appendix IX); has created some knowledge/ interest in research.
- HIHO (Health Information Health Outcome) is now defunct but does provide historical experience.
- Research track record in community development, cross cultural health, especially regarding Mennonites and Hutterites, rural nursing, health maintenance for the elderly, and nursing decision-making.

CHR:

- Research committee members have experience of designing proposals.
- Some areas of recent research are maternal and infant health study, community development, health promotion, measuring outcomes of interventions associated with poverty; Health Attitudes of Mexican Mennonites, population aboriginal health.
- Partnerships with University of Lethbridge, University of Calgary, Regional Health Authority and Municipality do exist: Ethnographic studies are an ongoing influence on policy.
- Unive:sity of Lethbridge worked with CHR for three years to increase application of research in service initiatives, identify research questions, and publish in the Canadian Journal of Public Health.
- Taber Integrated Primary Care Project is a rural location study, which is investigating alternative payment plan for physicians and integration of PHNs with physicians (presented at CPHA annual conference).
- Public Health has helped with collaboration and there is a shared long-term belief that coalitions work.

- Chinook is known for leadership that supports innovation; they have extensive partnerships - for example, the student health partnership is leading to provincial policy changes.
- SEARCH (Appendix IX) has connected research with practice for six years at the CRHA (2-3 participants/year from CRHA). A current SEARCH participant from the Public Health sector has undertaken research projects:

Challenges

University:

- SEARCH (Appendix IX) participants:
  - Focus is on quantitative methods and gaining an appreciation of research, not direct research experience or skills.
- Perception that U of L cannot offer the needed research/evaluative expertise
- BUT there is the opportunity of a cohort of health sciences faculty available.
- Research evidence suggesting a change to practice is not always well received by CHR.
- Lack of evidence based practice by CHR perhaps due to lack of access to resources and knowledge of search strategies.

CHR:

- No one conducting rural research as the now, defunct, Health Promotion Centre looked at this.
- Research does not always seem relevant to some staff and sometimes increases volume of work.

Conclusions

The University of Lethbridge and the Chinook Health Region (Public Health) are at early stages regarding the development of Research/Education/Service integration. The informants are well aware that collaboration takes time.

There have been successes in CHR/university collaboration in both research and education. There is a history of collaboration for clinical education placements and joint research ethics review. There may be a need to improve mutual understanding of the partners' expertise. The collaboration could be enhanced with formal liaison agreements and more cross- appointments.

Partners are sensitive to their rural base and have developed relationships and skills relevant to population health research in a rural context. SEARCH (Appendix IX) has supported research appreciation but also points to the need to provide release time to participate in collaborative research.

There is a great deal of interest and identified need for public health research. The complex administrative demands of restructuring and regional program administration across a spectrum of the health care needs present challenges for addressing population health needs. However, there also are differences in corporate needs within the Public Health Authority and the University that need further clarification and adjustments

Some possible areas for research focus are ethnographic studies and multicultural research especially with Mennonites and Hutterites; maternal and infant health; community development; rural health; health promotion; health maintenance; measuring outcomes of interventions associated with poverty; and how nurses make decisions.

Recommendations for CIHR-IPPH from the University Perspective

1. Support a process to clarify for Public Health, the university's capacity for evaluation research.

2. Support development of improved access to Public Health library resources and search strategies at Chinook Regional Health Authority to support evidence based practice.

3. Match with Alberta Heritage Foundation funds to provide necessary funds for research.

Recommendations for CIHR-IPPH from the CHR Perspective

1. Explore the feasibility of funding joint research initiatives with matching funds from the Alberta Heritage Foundation.

2. Streamline reporting requirements for research projects to be more practical and meaningful for both the researchers and the funders.

3. Identify and implement CIHR support for integrating research with service, as soon as possible.

APPENDIX VIII
CALGARY SITE VISIT REGARDING INTEGRATION OF PUBLIC HEALTH RESEARCH, EDUCATION AND SERVICE – JANUARY 22, 2002

Community Profile

Calgary has over 850,000 people and is the sixth largest city in Canada, and the largest between Vancouver and Toronto. Calgary has seen an increase of 150,000 people since the 1988. The major industries are oil and gas, followed by agriculture, tourism and technology.

Calgary Health Region

10101 Southport Road South West, Calgary, Alberta T2W 3N2

Seventeen Regional Health Authorities replaced more than 200 separate boards and administrations. The mandate of the Regional Health Authorities in Alberta covers all of health services including acute care, home care, long-term care, and public health.

Within the Calgary Health Region, the chief operating officer and a chief medical officer directly report to the CEO. The Research Initiatives in Nursing and other personnel within the Calgary Health Region conduct applied research. Seven (7) portfolios cover a geographic area that includes the City of Calgary and Rockyview, each have an executive director and a medical director. The Public Health Program is known as the Healthy Communities Portfolio.

University of Calgary, Department of Community Health Sciences

Centre for Health and Policy Studies (CHAPS)
3330 Hospital Drive North West, Calgary, Alberta

The Centre for Health and Policy Studies (CHAPS) was established in April 2001 in conjunction with: The Department of Community Health Sciences, Faculty of Medicine; and Faculty in economics, anthropology, political science and business at the University of Calgary. Since many of the challenges

facing the health system in Alberta are complex, CHAPS employs a multi-disciplinary, multi-faculty approach to research and represents a unique collaborative effort for contributing to the intellectual and financial requirements for undertaking a sustained program for health research.

CHAPS research focuses on health policy, health economics, health services and population health. They investigate community-based interventions to promote population health including housing policy and education policy.

Opportunities, challenges and recommendations for service, education and research collaboration from the perspective of Regional Health Authority (RHA) and University of Calgary, Centre for Health and Policy Studies (University) key informants, respectively.

1. Advancing the Population Health Mandate

Opportunities

- Calgary Health Region is an important CHAPS partner and is strategically aiming to stay current with respect to research evidence and is creating advocates.
- CHAPS faculty participate on numerous University and Health Authority committees to influence the use of evidence for practice.

RHA:

- There are some implicit processes but no explicit requirements to base policy/programming on evidence.
- Population health involves partnerships, including many university partners.

University:

- CHAPS represents an enormous opportunity for extending and developing programs that link research and practice.
- CHAPS has a track record of population health activity including research about community based social interventions to promote population health. For example, mental illness/ health surveillance, public consultation and participation; and health system research.

Challenges

RHA:

- Program evaluation design may exclude the determinants of health or health promotion (which sometimes is not measurable).
- Insufficient infrastructure to process research data.
- Policy sometimes appears to have more to do with politics than evidence based decision-making, despite people understanding the need for evidence.
- Service demands lead the Health Authority to focus more on day to day processes than population health

University:

- Insufficient collaborative thought about assumptions concerning the linkages between research and practice.
- Insufficient support for primary research – for example, major intervention research to test and evaluate policy.
- Insufficient cross faculty work.

2. Administration

Opportunities

RHA:

- Increasing organizational commitment to research:
  - SEARCH (Appendix IX) trains people to use, and participate in, research.
  - Staff are applying for funding and need a track record as PI.

    - Learning and development group within Human Resources department that influences service delivery.
- Service content and university expertise are interdependent.
- There are positive examples of shared accountabilities and seconded appointments.
- Examples of Provincial Collaboration include:
    - Health Innovation Fund.
    - 5 centres work together and work with different universities.
    - CHR collaborates with both Universities of Alberta and Calgary.

Funding opportunities:

- Alberta Heritage Foundation.
- Federal research funding could help to change practice.
- Alberta Registered Nurses Educational Trust (ARNET), supports nurses to attend conferences, participate in graduate education, etc.
- There is core funding for research from the Regional Health Authority.
- $50,000 is jointly allocated between the offices of the Vice President / Chief Nursing Officer and the Faculty of Nursing to fund projects related to the development of questions related to practice.
- The CHAPS model of collaboration will be important to developing links with other service providers and researchers.

University:

- University of Calgary has a history of integration and continues to encourage Partnerships across faculty boundaries. For example, CHAPS, SEARCH, new BHSc.
- The Department of Community Health Sciences (CHS) has a commitment to their community which is demonstrated in responsive educational programs and collaborative relevant research.

- A newly established Health Technology Implementation Unit (HTIU) represents another partnership between the Department of Community Health Sciences and the Calgary Health Region.
    - Staff advocate for more infrastructure for population health research and do collaborative research.
- CHAPS:
    - Provides money for local research and internships.
    - Strategic hiring of good integrators.
    - Creates partnerships.
    - Participates in advocacy.
- Calgary Health Region has funded two PhD students at full time salary for two years.

Challenges

RHA:

- Public Health would like to further strengthen formal linkages with the university building on existing individual personal relationships.
    - Additional linkages with other departments would be welcome. E.g. Sociology.
    - Conflicting goals and career recognition for service and research personnel result in different motivation for collaboration on research projects.
    - There is some history of non-collaboration with the university; "we need a cultural shift". Sometimes university researchers do not recognize that CHR staff also need to publish for career development.
- The CHR organization needs to value the research /education functions.
    - Infrastructure coordination is needed.
    - Administrative leaders are felt to be inconsistent in their support of research in Calgary Health Region.
    - Time is an issue for service staff. "We do not have time to crunch data"(would prefer to participate in analyzing the data instead of contracting out).

- Human Resources have not yet developed appropriate classification systems to cover people who have research and service responsibility.

- Calgary Health Region contracts out because contractors can get the job done more quickly, whereas the University does not have the staffing flexibility to respond quickly to these requests.
  - As evaluators, researchers are sometimes involved too late to do the job effectively.
  - There is a negative signal if the university does not accept to do the work.

Alberta Provincial Department of Health and Wellness has reduced staff and capacity resulting in a lack of administrative analysis. Instead, they rely on independent health agencies, making it more difficult to advocate for evidence based practice and to influence legislative policy.

- The Regional transition budget which provided transition funding (in 1997 $1.1M - Health Promotion demonstration initiatives) has been cut and risks being eliminated from Regional budget, which could erode infrastructure support.

  University:
  - Lack of recognition for academics for time spent in community participation.
  - Insufficient infrastructure capacity to be responsive to research needs of the field.
  - Need more coordination in Calgary Health Region; although there are individual connections with faculty, more system linkages based on a network analysis would be worthwhile.
  - CHR does not have a VP Research. E.g. CHAPS Director chairs Regional Research and Development Committee; need increased dialogue about appropriate evaluation.

- Important to encourage methodological rigour from consultants as well as from academics when working collaboratively for health and healthcare improvement.
- Many more cross appointments both ways would strengthen the collaboration.

3. Education

Opportunities

RHA:

- CHR has demonstrated organizational commitment to SEARCH (Appendix IX) and provides salary and dedicated time for participation.
- Examples of integration between the Region and University of Calgary include:
  - The University of Calgary based Professional Education Research Centre (PERC), the Faculty of Education (professional faculties) collaborates with the Calgary Health Region but requires infrastructure development.

University:

- The Department offers MSc and PhD level training in health research, epidemiology and biostatistics.
- SEARCH (Appendix IX):
  - Faculty who have worked with SEARCH have increased their understanding of the knowledge base and expertise in practice settings.
- Several joint appointments between the university and the Region – involving practitioners in education – for example, Head of Residency Program is a Medical Director in the Region.
- Alberta Consultative Health Research Network (ACHRN) extends opportunities for practitioners to access workshops and receive consultations regarding the use of evidence in practice – this network extends from, and aligns with, SEARCH.
- Health Methods Research course:
  - 150 people workshop that includes a range of basic mini sessions on aspects of health research methods, proposal writing, ethics, budgeting, funding, etc – just completed 6th annual workshop.

Challenges

RHA:

- There are many practitioners and many units, which makes collaboration complex. For example, Medicine has a formal agreement, which clarifies expectations of research and service and involves some Regional Health Authority funding while Nursing is just beginning more collaborative initiatives.

University:

- Practitioners and academics are perceived to lack an appreciation of each other's specialties, knowledge and constraints.
- Sometimes CEO or Health Unit managers may see SEARCH graduates as sole experts in research rather than advocates for its use and participants in collaborative research.

4. Research Experience

Opportunities

RHA:

- Collaboration with the university to develop relevant evidence that improves practice has been demonstrated.
- Calgary Children's Initiative, which is operated by the United Way, is incorporating research into practice: staff from region/university are seconded to work on this initiative.

University:

- Interest in the economics of population health has two distinct components:
  - Applied –can we find the evidence?
  - Methods—which techniques work?

- An example of a community development intervention randomized controlled trial and epidemiological study is PRISM (Program Resources Information and Support to Mothers).
- A program of study regarding organizational change is funded by Canadian Health Services Research Foundation (CHSRF).
- Trying to fill important gaps: E.g. rapid surveillance for Alberta Health.
    - Quality Improvement for Health Information (QIHI) in Calgary Health Region.
    - Calgary Health Region/Province/private/faculty of medicine 3 years to start.
    - EcoPRISM sociologists: Economic and Ecological evaluation of PRISM- what is the impact on the context of the subjects.
- Joint CIHI/CIHR infrastructure grant which explores: Infrastructure for networks; data sets that are available; cost of accessing/analyzing data; making data comparable in different contexts.
- CHSRF and AHFMR funded research to examine the role of public participation in the decision-making process.
- Trying to create spaces for effective research collaboration and knowledge exchange.

Challenges

RHA:

- Ownership of results:
    - Tension is created when staff have participated in research projects and may not be involved in publication or presentation.
    - Some conflict about different goals in doing research/evaluation research.
- Some staff do literature searches but it has been noted that the library is sometimes not well used.
- University appears to want to have more control over research protocols.

- Definition of research evidence needs to be clarified and broadened to include:
  - Innovation and evaluation, quasi-experimental designs and methodology relevant to health promotion research.
- CHR research is not always disseminated; researchers wait for final results (CHR might prefer to act on preliminary results or the pilot project).

University:

- Moving beyond traditional boundaries of research disciplines and practice environments.
- Supporting partnerships over time.
- Evaluation research funds are too short term.
- Practitioners are sometimes perceived to have insufficient understanding of the difference between research and evaluation of interventions.

- Lack of intervention studies to find ways of changing health which:
  - Support community needs and capacities.
  - Build on strategic bargaining.
- High decision-maker turnover, which impacts on decision-maker participation in research or education.
  - More investigation of funding dynamics is required as decision-makers move to macro policy context.

Conclusions

Calgary Health Region staff are very interested in integrating research, education and service and have numerous examples of working well with university colleagues.

The CHR has a cadre of very well qualified staff. There may be funding opportunities from within the CHR as well as from external sources.

There are many organizational challenges that could be addressed if the organization were able to dedicate some time to resolving the issues. Linkages with University of Calgary are well established with the Faculty of Medicine and in the beginning stages with Nursing. For other professional groups (speech, dietetics, pharmacy, etc), the university linkages are much less developed. There needs to be greater acceptance of the different health promotion research methodologies required.

The CHAPS faculty is diligent about thinking about systems and means to address population health issues. They are developing and testing new population health methodology. There is a great deal of interest in strengthening linkages with the local health authority and with provincial and national population health research activities.

Research focus could be on community development; networking; capacity building; organizational change; surveillance; making data comparable in different contexts; (For example, Quality Improvement for Health Information (QIHI), economic and ecological evaluations; expanding evidence based decision-making for population health and health promotion; improving knowledge transfer opportunities through shared networks and programs of work.

Some of the key stakeholders who should be involved in future developments are Drs. Lloyd Sutherland and Ann Casebeer, CHAPS, Brent Friesen, Medical Officer of Health, Jeanne Besner, Director Research Initiatives in Nursing and Health and other colleagues from both organizations.

Recommendations for CIHR-IPPH from the CHR Perspective

1. CIHR-IPPH could consider a national consensus initiative to facilitate agreed upon research outcomes.

2. Encourage the release of the Public Health Capacity Report.

3. Provide funds to facilitate resolution of issues related to organizational challenges for
improving knowledge uptake for policy development and to enhance the university/ practice linkages.

4. Facilitate acceptance of health promotion research methodology.

5. Strongly encourage matching funds to support research initiatives (funds available for the children's initiative in Calgary was a good model).

Recommendations for CIHR-IPPH from CHAPS Perspective

1. Support intervention research to test and evaluate the contextual impacts on health in keeping with current population health theory.

2. Provide support for the development of proposal after accepting letter of intent in keeping with the CHSRF model.

3. Develop more ways to work across the boxes – for example, a IPPH/CHSRF collaboration.

4. Encourage granting committees to consider the policy relevance of the research.

5. CIHR-IPPH grants should fund etiological research about population health.

6. Learn from CIHR-Institute of Aboriginal Peoples' Health with respect to working with communities.

7. Develop dialogues about priorities for a national agenda.

8. Improve CIHR's peer review processes.

9. Support more risk taking in the kind of research funded.

APPENDIX IX
SEARCH (SWIFT EFFICIENT APPLICATION OF RESEARCH IN COMMUNITY HEALTH) PROGRAM

Project Description

The SEARCH Program is a two-year health research and professional development program for community-based health professionals.

The SEARCH Program of practice-based training and networking provides education, training, mentoring and research collaboration through a virtual learning community of managers and health professionals in partnership with university-based researchers and teachers. The program provides an introduction to health research, information retrieval, management decision-making, health policy and economics.

The participants are selected from Alberta's health authorities and physician groups. Throughout the two years, participants engage in residential face-to-face instruction, online learnings between modules and project work within their current work sites. The intended outcome is a network of individuals around the province who are well placed to ensure that health research is relevant and rigorously conducted.

SEARCH is funded by the Alberta Heritage Foundation for Medical Research with participant salaries being paid by their respective sponsors.

Partners

SEARCH is a partnership with the Alberta Heritage Foundation for Medical Research; the Alberta Health Care System and several faculties at the Universities of Alberta and Calgary.

Sponsoring Agencies:

Alberta Heritage Foundation for Medical Research (www.ahfmr.ab.ca)
University of Alberta (www.ualberta.ca)
University of Calgary (www.ucalgary.ca)
Private enterprise

Program Partners include:

Alberta Regional Health Authorities
Alberta Mental Health Board
Rural Physicians Alberta
Family Physicians Research Network

Submitted to the
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